IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

First named inventor: **Henry Haverinen**

App. Serial No.: **10/659,774**

Filed: **Sept. 10, 2003**

Title: **METHOD AND APPARATUS ENABLING REAUTHENTICATION IN A CELLULAR COMMUNICATION SYSTEM**

Group Art Unit: **2153**

Examiner: **Thomas J. Dailey**

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BRIEF FOR APPELLANT (37 C.F.R. § 41.37)

Sir:

This brief is in furtherance of the Notice of Appeal filed in this case on March 28, 2011 along with a Pre-Appeal Brief Request for Review, from which a Notice of Panel Decision was mailed May 24, 2011, and is an appeal from the final Office Action mailed January 4, 2011.

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Briefs-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Cathy Sturmer — 6.23.11
Date

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I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this appeal is Nokia Corporation, a corporation organized under the laws of Finland.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

There are no related appeals or interferences.

III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

Claims 1, 4, 7, 10, 13-15, 20-21 and 24-29 are pending in this application. Claim 1, 4, 7, 10, 13-15, 20-21 and 24-29 are rejected, and the rejection of claims 1, 4, 7, 10, 13-15, 20-21 and 24-29 is being appealed.

IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

No amendment to the claims was filed after the final rejection, and therefore all amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

Independent claim 1 is directed to a method that includes receiving a request for full authentication of a terminal. *See* specification page 9, lines 22-27. The method further includes transmitting to the terminal a reauthentication identity including a unique realm name uniquely identifying an authentication server in response to the request for full authentication. *See* specification page 10, lines 1-6. The method also includes receiving a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name uniquely identifying the authentication server. *See* specification page 10, lines 16-19. In the method, the request for reauthentication is routed to the authentication server according to the unique realm name included in the request for reauthentication. *See* specification page 11, lines 3-14.

Independent claim 4 is directed to an apparatus that includes means (23a, 23b) for receiving a request for full authentication of a terminal. *See* specification page 9, lines 22-27; Figure 2. The apparatus also includes means (23a) for transmitting to the terminal a reauthentication identity including a unique realm name uniquely identifying an authentication

server in response to the request for full authentication. *See* specification page 10, lines 1-6; Figure 2. The apparatus further includes means (21a) for receiving a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name uniquely identifying the authentication server. *See* specification page 10, lines 16-19; Figure 2. The request for reauthentication is routed to the authentication server according to the unique realm name included in the request for reauthentication. *See* specification page 11, lines 3-14.

Independent claim 10 is directed to a system that includes a first authentication server configured to receive a request for full authentication of a terminal. *See* specification page 9, lines 22-27. The first authentication server is configured to transmit to the terminal a reauthentication identity including a unique realm name uniquely identifying the first authentication server in response to the request for full authentication. *See* specification page 10, lines 1-6. The system also includes a second authentication server configured to receive a request for reauthentication from the terminal. *See* specification page 10, lines 16-19. The request for reauthentication including the reauthentication identity including the unique realm name identifying the first authentication server. *See* specification page 10, line 19. The second authentication server is configured to route the request for reauthentication to the first authentication server according to the unique realm name identifying the first authentication server. *See* specification page 11, lines 3-14.

Independent claim 13 is directed to an apparatus that includes means (21a) for transmitting a request for full authentication to a first authentication server. *See* specification page 9, lines 22-27. The apparatus also includes means (22) for receiving from the first authentication server a reauthentication identity including a unique realm name uniquely indicating the first authentication server in response to the request for full authentication. *See* specification page 10, lines 1-6. The apparatus further includes means (22) for transmitting to a second authentication server a request for reauthentication using the reauthentication identity including the unique realm name. *See* specification page 10, lines 16-19; page 11, lines 3-14.

Independent claim 15 is directed to an apparatus that includes a processor configured to receive a request for full authentication of a terminal. *See* specification page 9, lines 22-27. The processor of the apparatus is further configured to transmit to the terminal a reauthentication identity including a unique realm name uniquely identifying an authentication server in response to the

request for full authentication. *See* specification page 10, lines 1-6. The processor of the apparatus is also configured to receive a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name uniquely identifying the authentication server. *See* specification page 10, lines 16-19. The request for reauthentication is routed according to the authentication server according to the unique realm name included in the request for reauthentication. *See* specification page 11, lines 3-14.

Independent claim 20 is directed to an apparatus that includes a processor configured to transmit a request for full authentication to a first authentication server. *See* specification page 9, lines 22-27. The processor of the apparatus is further configured to receive from the first authentication server a reauthentication identity including a unique realm name uniquely indicating the first authentication server in response to the request for full authentication. *See* specification page 10, lines 1-6. The processor of the apparatus is also configured to transmit to a second authentication server a request for reauthentication using the reauthentication identity including the unique realm name. *See* specification page 10, lines 16-19.

Independent claim 27 is directed to a method that includes transmitting a request for full authentication to a first authentication server. *See* specification page 9, lines 22-27. The method also includes receiving from the first authentication server a reauthentication identity identity including a unique realm name uniquely indicating the first authentication server in response to the request for full authentication. *See* specification page 10, lines 1-6. The method further includes transmitting to a second authentication server a request for reauthentication using the reauthentication identity including the unique realm name. *See* specification page 10, lines 16-19.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Claims 1, 4, 7, 10, 13-15, 20-21 and 24-29 are rejected under 35 U.S.C. § 103(a) as unpatentable over *O'Neill* (U.S. Appl. Publ. No. 2003/0176188) in view of *Westerdal* (U.S. Appl. Publ. No. 2002/0133719).

Claims 14 and 21 are rejected under 35 U.S.C. § 103(a) as unpatentable over *O'Neill* in view of *Westerdal* and *Barriga-Caceres et al.* (U.S. Appl. Publ. No. 2003/0163733).

VII. ARGUMENT (37 C.F.R. § 41.37(c)(1)(vii))

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Appl. Publ. No. 2003/176188 and U.S. Appl. Publ. No. 2002/0133719

Claim 1

Appellant respectfully submits that claim 1 is not disclosed or suggested by the cited references, because the cited references fail to disclose or suggest all of the limitations recited in claim 1. The cited references, alone or in combination, at least fail to disclose or suggest transmitting a reauthentication identity to a terminal in response to a request for full authentication, as recited in claim 1.

The Office acknowledges on page 6 of the final Office Action of January 4, 2011, that *O'Neill* does not disclose that the transmission to the terminal of the reauthentication identity is in response to a request for full authentication of the terminal, and relies upon *Westerdal* for this teaching. However, appellant respectfully submits that *O'Neill* also does not disclose or suggest transmitting to a terminal a reauthentication identity. Instead, *O'Neill* only discloses that the mobile node may send an identity to the network, since message 550 is directed towards the Remote Home Agent 112 of the MN 202 in the home domain 1102, but it is first sent to the access router 128 as message 550a and it is then sent to the remote home agent 112 as message 550b. *See O'Neill* paragraph [0053]. The message 550 includes a network access identifier having a user part and a realm part, however the message 550 is sent towards the Remote Home Agent 112, and therefore is not transmitted to the terminal, as recited in claim 1. It is understood that the Network Access Identifier (NAI) is a way of identifying users who request access to a network, and a user may provide the NAI to the network when first accessing a network. Therefore, appellant respectfully submits that *O'Neill* does not disclose or suggest that the terminal has a reauthentication identity transmitted to the terminal, as recited in claim 1. For at least this reason, claim 1 is not disclosed or suggested by the cited references.

Furthermore, applicant respectfully submits that *Westerdal* fails to make up for the deficiencies in the teachings of *O'Neill* identified by the Office. *Westerdal* is directed to a system that facilitates sharing authentication information between a plurality of servers, a first server directs a client to communicate a first identity to an authentication server, so that the authentication server can attempt to associate the first identifier with a known client. *See*

Westerdal Abstract. However, *Westerdal* is completely silent regarding reauthentication. Furthermore, *Westerdal* does not disclose or suggest that a reauthentication identity includes a unique realm name uniquely identifying the authentication server, or that the request for reauthentication is routed to the authentication server according to the unique realm name included in the request for reauthentication, as recited in claim 1.

Instead, Figure 3 of *Westerdal* shows a process for associating client (102) with an authentication server cookie (107). In this process, client (102) sends an authentication identity (AID) to authentication server (112). If the authentication server (112) determines that a cookie contains a known authentication server identifier, then the client (102) is known to the authentication server (112). *See Westerdal* paragraph [0036]. However, if the cookie does not contain a known authentication server identifier, the authentication server (112) generates a new authentication server identifier for the client (102). *See Westerdal* paragraph [0037]. However, the cookies do not contain a unique realm name as recited in claim 1, and they are not transmitted in response to a request for full authentication. Accordingly, *Westerdal* fails to make up for the deficiencies in the teachings of *O'Neill* identified by the Office. Therefore, for at least the reasons discussed above, claim 1 is not disclosed or suggested by the cited references.

Claims 4, 10, 13, 15, 20 and 27

Independent claims 4, 10, 13, 15, 20 and 27 contain limitations similar to those recited in claim 1. Therefore, for at least the reasons discussed above, claims 4, 10, 13, 15, 20 and 27 are not disclosed or suggested by the cited references.

Claims 7, 24-26 and 28-29

Dependent claims 7, 24-26 and 28-29 all ultimately depend from an independent claim. Therefore, the dependent claims are not disclosed or suggested by the cited references at least in view of their dependencies.

Rejection Under 35 U.S.C. § 103(a) in view of U.S. Appl. Publ. No. 2003/176188, U.S. Appl. Publ. No. 2002/0133719 and U.S. Appl. Publ. No. 2003/0163733

Claims 14 and 21

Dependent claims 14 and 21 all ultimately depend from an independent claim. Therefore, the dependent claims are not disclosed or suggested by the cited references at least in view of their dependencies.

Conclusion

For the reasons discussed above, appellant respectfully submits that the rejections of the final Office Action have been shown to be inapplicable, and respectfully requests that the Board reverse the rejections of pending claims 1, 4, 7, 10, 13-15, 20-21 and 24-29. If any additional fee is required for submission of this Appeal Brief, the Commissioner is hereby authorized to charge Deposit Account No. 23-0442.

Respectfully submitted,

Date: 22 Jun 2011

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CLAIMS APPENDIX

1. A method, comprising:

receiving a request for full authentication of a terminal;

transmitting to the terminal a reauthentication identity including a unique realm name uniquely identifying an authentication server in response to the request for full authentication; and

receiving a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name uniquely identifying the authentication server;

wherein the request for reauthentication is routed to the authentication server according to the unique realm name included in the request for reauthentication.

4. An apparatus, comprising:

means for receiving a request for full authentication of a terminal;

means for transmitting to the terminal a reauthentication identity including a unique realm name uniquely identifying an authentication server in response to the request for full authentication; and

means for receiving a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name uniquely identifying the authentication server;

wherein the request for reauthentication is routed to the authentication server according to the unique realm name included in the request for reauthentication.

7. A computer program product comprising: a computer readable storage structure embodying computer program code thereon for execution by a computer processor in an authentication network element, wherein said computer program code includes instructions for performing a method according to claim 1.

10. A system, comprising:

a first authentication server configured to receive a request for full authentication of a terminal, and configured to transmit to the terminal a reauthentication identity including a unique realm name uniquely identifying the first authentication server in response to the request for full authentication; and

a second authentication server configured to receive a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name identifying the first authentication server, and configured to route the request for reauthentication to the first authentication server according to the unique realm name identifying the first authentication server.

13. An apparatus, comprising:

means for transmitting a request for full authentication to a first authentication server;

means for receiving from the first authentication server a reauthentication identity including a unique realm name uniquely indicating the first authentication server in response to the request for full authentication; and

means for transmitting to a second authentication server a request for reauthentication using the reauthentication identity including the unique realm name.

14. The apparatus as in claim 13, wherein the means for transmitting to the second authentication server includes the reauthentication identity in an identity response packet according to an Extensible Authentication Protocol.

15. An apparatus, comprising a processor configured to:

receive a request for full authentication of a terminal;

transmit to the terminal a reauthentication identity including a unique realm name uniquely identifying an authentication server in response to the request for full authentication; and

receive a request for reauthentication from the terminal, the request for reauthentication including the reauthentication identity including the unique realm name uniquely identifying the authentication server;

wherein the request for reauthentication is routed according to the authentication server according to the unique realm name included in the request for reauthentication.

20. An apparatus, comprising a processor configured to:

transmit a request for full authentication to a first authentication server;

receive from the first authentication server a reauthentication identity including a unique realm name uniquely indicating the first authentication server in response to the request for full authentication; and

transmit to a second authentication server a request for reauthentication using the reauthentication identity including the unique realm name.

21. The apparatus as in claim 20, wherein the processor is configured to include the reauthentication identity in an identity response packet according to an Extensible Authentication Protocol.

24. The apparatus as in claim 4, wherein the apparatus comprises an authentication server.

25. The apparatus as in claim 4, wherein the apparatus comprises a proxy server.

26. The apparatus as in claim 4, wherein the apparatus comprises a service access point for authentication by the authentication server.

27. A method, comprising:

transmitting a request for full authentication to a first authentication server;

receiving from the first authentication server a reauthentication identity identity including a unique realm name uniquely indicating the first authentication server in response to the request for full authentication; and

transmitting to a second authentication server a request for reauthentication using the reauthentication identity including the unique realm name.

28. A method as in claim 27, wherein the reauthentication identity is included in an identity response packet according to an Extensible Authentication Protocol.

29. A computer program product comprising: a computer readable storage structure embodying

computer program code thereon for execution by a computer processor in a terminal, wherein said computer program code includes instructions for performing a method according to claim 27.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.